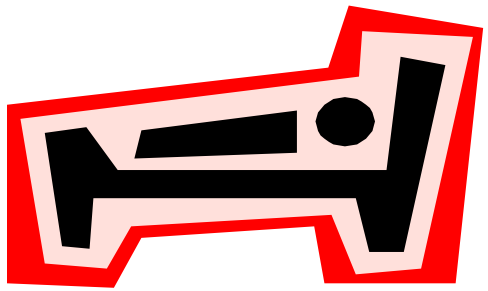
**

# Numotech, Inc.

**Numotech, Inc. is a California-based company specializing in "wound care" research and development.**

**Sandia is currently involved in a $5.76 million CRADA with Numotech. The current objective involves the HEALING of already-present wounds and sores.**



Sandia National Laboratories

# Sandia and the DOE Have Previously Partnered With Numotech

**Numotech researchers contacted the New Mexico Technology Deployment Pilot Project (NMTDPP) in 1995 for help in PREVENTING the existence of pressure ulcers.**

**The NMTDPP is composed of the following agencies:**

- **Sandia National Laboratories**
- **Department of Energy**
- **UNM's Research Institute for Assistive and Training Technologies (RIATT)**
- **Laguna Industries Inc.**

Sandia National Laboratories

# The "Generic Total Contact Seat"

**This earlier partnership (between the NMTDPP and Numotech, Inc.) helped produce an "active wheelchair."**

**The "Generic Total Contact Seat" involved the inflation/deflation of different areas of a wheelchair's seat cushion (to alleviate sustained pressure on any one spot).**

Sandia National Laboratories

# Numotech's Current Work

**Numotech is expanding work on current unique oxygen-bath techniques developed by Dr. Madelene Heng.**

**Oxygen-bath techniques are used for healing wounds, burns, pressure sores, and pressure ulcers…quickly and with reduced scarring. Pressure ulcers often lead to amputation, sometimes death.**

Sandia National Laboratories

# How Does the Oxygen Bath Work?

**The injured part is surrounded by a plastic bag filled with a slightly higher percentage of oxygen than the atmosphere provides, and at a slightly higher pressure.**

**Loss of blood flow in skin capillaries is caused by unrelieved pressure. If blood flow is not encouraged, skin tissue will break down, then die. This break-down process advances from skin (gangrene) to bone, making amputation necessary.**

Sandia National Laboratories

# Sandia's Involvement in this Venture

**Researchers at Sandia National Laboratories have been asked to help simplify the operation of Numotech's Topical Hyperbaric Oxygen Treatment (THOT) --the oxygen-bath sytem-- through**

- **inexpensive sensors and**
- **lightweight pumps.**

Sandia National Laboratories

# Why is Sandia Interested in this Project?

**The Topical Hyperbaric Oxygen Treatment is using the development of sensors…to detect minute amounts of effluents expelled by healing wounds. (You do not want to over-oxygenate.)**

**Sandia uses similar sensors…to detect minute amounts of trace elements from aging nuclear weapons to indicate their state of reliability.**

Sandia National Laboratories